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NEWS 3 AUG 09 INSPEC enhanced with 1898-1968 archive  
NEWS 4 AUG 28 ADISCTI Reloaded and Enhanced  
NEWS 5 AUG 30 CA(SM)/CPlus(SM) Austrian patent law changes  
NEWS 6 SEP 11 CA/CPlus enhanced with more pre-1907 records  
NEWS 7 SEP 21 CA/CPlus fields enhanced with simultaneous left and right  
truncation  
NEWS 8 SEP 25 CA(SM)/CPlus(SM) display of CA Lexicon enhanced  
NEWS 9 SEP 25 CAS REGISTRY(SM) no longer includes Concord 3D coordinates  
NEWS 10 SEP 25 CAS REGISTRY(SM) updated with amino acid codes for pyrrolysine  
NEWS 11 SEP 28 CEABA-VTB classification code fields reloaded with new  
classification scheme  
NEWS 12 OCT 19 LOGOFF HOLD duration extended to 120 minutes  
NEWS 13 OCT 19 E-mail format enhanced  
NEWS 14 OCT 23 Option to turn off MARPAT highlighting enhancements available  
NEWS 15 OCT 23 CAS Registry Number crossover limit increased to 300,000 in  
multiple databases  
NEWS 16 OCT 23 The Derwent World Patents Index suite of databases on STN  
has been enhanced and reloaded  
NEWS 17 OCT 30 CHEMLIST enhanced with new search and display field  
NEWS 18 NOV 03 JAPIO enhanced with IPC 8 features and functionality  
NEWS 19 NOV 10 CA/CPlus F-Term thesaurus enhanced  
NEWS 20 NOV 10 STN Express with Discover! free maintenance release Version  
8.01c now available  
NEWS 21 NOV 13 CA/CPlus pre-1967 chemical substance index entries enhanced  
with preparation role  
NEWS 22 NOV 20 CAS Registry Number crossover limit increased to 300,000 in  
additional databases  
NEWS 23 NOV 20 CA/CPlus to MARPAT accession number crossover limit increased  
to 50,000  
NEWS 24 NOV 20 CA/CPlus patent kind codes will be updated  
NEWS 25 DEC 01 CAS REGISTRY updated with new ambiguity codes  
  
NEWS EXPRESS NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT  
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.  
  
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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

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=> s us 2004-0230057 /pn  
 L1 1 US 2004-0230057 /PN  
 (US2004230057/PN)

=> file reg		
COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	2.41	2.62

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STRUCTURE FILE UPDATES: 8 DEC 2006 HIGHEST RN 915121-42-5  
 DICTIONARY FILE UPDATES: 8 DEC 2006 HIGHEST RN 915121-42-5

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TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

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REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=> tra rn l1  
 L2 TRANSFER L1 1- RN : 16 TERMS  
 L3 16 L2

=> d scan

L3 16 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN Quinolinium, 4-[3-(1-butyl-5-chloro-1,3-dihydro-3,3-dimethyl-2H-indol-2-

ylidene)-1-propenyl]-1-ethyl-, hexafluorophosphate(1-) (9CI)  
MF C28 H32 Cl N2 . F6 P

CM 1

/ Structure 1 in file .gra /

CM 2

/ Structure 2 in file .gra /

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 16 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
IN Quinolinium, 4-[3-(1-butyl-5-chloro-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene)-1-propenyl]-1-ethyl-, perchlorate (9CI)  
MF C28 H32 Cl N2 . Cl O4

CM 1

/ Structure 3 in file .gra /

CM 2

/ Structure 4 in file .gra /

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 16 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
IN Quinolinium, 1-butyl-2-[3-(3-butyl-1,3-dihydro-1,1-dimethyl-2H-benz[e]indol-2-ylidene)-1-propenyl]-, perchlorate (9CI)  
MF C34 H39 N2 . Cl O4

CM 1

/ Structure 5 in file .gra /

CM 2

/ Structure 6 in file .gra /

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 16 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
IN Silver alloy, nonbase, Ag,Ti (9CI)  
MF Ag . Ti  
CI AYS

Component  
=====

Ag  
Ti

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 16 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
IN Gold (8CI, 9CI)  
MF Au  
CI COM

/ Structure 7 in file .gra /

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 16 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
IN Aluminum (8CI, 9CI)  
ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT  
MF Al  
CI COM

/ Structure 8 in file .gra /

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 16 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
IN Quinolinium, 4-[3-(1-butyl-1,3-dihydro-3,3-dimethyl-5-nitro-2H-indol-2-ylidene)-1-propenyl]-1-ethyl-, hexafluorophosphate(1-) (9CI)  
MF C28 H32 N3 O2 . F6 P  
CM 1

/ Structure 9 in file .gra /

CM 2

/ Structure 10 in file .gra /

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 16 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
IN Quinolinium, 1-butyl-2-[3-(3-butyl-1,3-dihydro-1,1-dimethyl-2H-benz[e]indol-2-ylidene)-1-propenyl]-, hexafluorophosphate(1-) (9CI)  
MF C34 H39 N2 . F6 P  
CM 1

/ Structure 11 in file .gra /

CM 2

/ Structure 12 in file .gra /

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> s l3 and quinolin?

746351 QUINOLIN?

L4 8 L3 AND QUINOLIN?

=> file caplu

COST IN U.S. DOLLARS

FULL ESTIMATED COST

SINCE FILE  
ENTRY  
5.64

TOTAL  
SESSION  
20.01

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=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.46

20.47

FILE 'CAPLUS' ENTERED AT 23:43:13 ON 09 DEC 2006  
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=> s l4

L5 2 L4

=> d all 1-2

L5 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN  
AN 2005:618741 CAPLUS <<LOGINID::20061209>>  
DN 143:195246  
ED Entered STN: 18 Jul 2005  
TI Dyes for optical recording medium  
IN Guo, Chaonan; Jiang, Songgui  
PA Laide Science & Technology Co., Ltd., Peop. Rep. China  
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, No pp. given  
CODEN: CNXXEV  
DT Patent  
LA Chinese  
IC ICM C09B057-00  
ICS G11B007-24  
CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic

. Section cross-référence(s) : 74

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1552768	A	20041208	CN 2003-140813	20030604
CN 2003-140813		20030604		

OS MARPAT 143:195246  
GI

**AB** The dye I and II (A = arom. or polycyclic arom. carbonyl; B 1 = H, OH, alkoxy, halogen, nitro, nitroso, (un)substituted amino, (un)substituted sulfanilamido; R<sub>1</sub>, R<sub>2</sub> = (un)substituted linear or branched alkyl, alkenyl, aralkyl, alkoxy-carboxyl, alkoxy-carbonyl, alkoxy, alkylhydroxy, alkyl-amino, alkylcarbamoyl, alkylsulfamoyl, alkylalkoxy, alkylhalo, alkylsulfonyl or alkylcarboxy; X- = anion) is useful for optical recording medium.

Optical recording materials  
(dyes for optical recording medium)

RL: TEM (Technical or engineered material use); USES (Uses)  
(polymers, substrate; dyes for optical recording medium)

Polyesters, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(substrates; dyes for optical recording medium)

RL: TEM (Technical or engineered material use); USES (Uses)  
(antireflection layer; dyes for optical recording medium)

RL: TEM (Technical or engineered material use); USES (Uses)  
(dyes for optical recording medium)

RL: TEM (Technical or engineered material use); USES (Uses)  
(substrates; dyes for optical recording medium)

CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

## Section cross-reference(s) : 74

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004230057	A1	20041118	US 2004-820600	20040407
	TW 244494	B1	20051201	TW 2003-92113053	20030514
PRAI	TW 2003-92113053	A	20030514		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004230057	ICM	C07D209-56
	ICS	G11B007-24; C07D453-02
	INCL	546134000; 430270180; 546135000; 548427000; 548469000
	IPCI	C07D0209-56 [ICM,7]; C07D0209-00 [ICM,7,C*]; G11B0007-24 [ICS,7]; C07D0453-02 [ICS,7]; C07D0453-00 [ICS,7,C*]
	IPCR	C07D0401-00 [I,C*]; C07D0401-06 [I,A]; G11B0007-24 [I,C*]; G11B0007-24 [N,A]; G11B0007-247 [I,A]
	NCL	546/134.000; 430/270.180; 546/135.000; 548/427.000; 548/469.000
	ECLA	C07D401/06+215+209
TW 244494	IPCI	C09B0025-00 [ICS,7]
	IPCR	C07D0401-00 [I,C*]; G11B0007-24 [I,C*]; C07D0401-06 [I,A]; G11B0007-24 [N,A]; G11B0007-247 [I,A]

OS MARPAT 141:425348

GI

/ Structure 14 in file .gra /

AB An optical recording medium dye has the structure I where A is an arom. group or a polycyclic arom. group; B1 = H, OH, alkyloxy, halogen, NO2, nitroso, a substituted and unsubstituted amine group, a substituted or unsubstituted sulfamoyl; R1, R2 = substituted or unsubstituted, straight chain or branched alkyl, alkenyl, aralkyl, alkoxy carbonyl, alkoxy carboxyl, alkoxy, alkyl hydroxyl, alkylamino, alkyl carbamoyl, alkyl sulfamoyl, alkylalkoxy, alkyl halide, alkylsulfonyl or alkyl carboxyl; and X- is anion.

ST optical recording medium photo dye

IT Dyes

Optical recording materials

(dye optical and thermal property required for optical recording medium)

IT Cycloalkenes

RL: TEM (Technical or engineered material use); USES (Uses)

(polymers, substrate; dye optical and thermal property required for optical recording medium)

IT Polycarbonates, uses

Polyesters, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(substrate; dye optical and thermal property required for optical recording medium)

IT 7429-90-5, Aluminum, uses 7440-22-4, Silver, uses 7440-50-8, Copper, uses 7440-57-5, Gold, uses 11144-43-7 37263-66-4 50950-97-5

RL: TEM (Technical or engineered material use); USES (Uses)

(antireflection layer; dye optical and thermal property required for optical recording medium)

IT \*\*\*794518-86-8\*\*\* \*\*\*794518-88-0\*\*\* \*\*\*794518-89-1\*\*\*

\*\*\*794518-91-5\*\*\* \*\*\*794518-93-7\*\*\* \*\*\*794518-95-9\*\*\*

\*\*\*794518-97-1\*\*\* \*\*\*794518-98-2\*\*\*

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(dye optical and thermal property required for optical recording medium)

IT 9011-14-7, Polymethyl methacrylate

RL: TEM (Technical or engineered material use); USES (Uses)

(substrate; dye optical and thermal property required for optical recording medium)

=&gt; d his

(FILE 'HOME' ENTERED AT 23:41:06 ON 09 DEC 2006)

L1 FILE 'CAPLUS' ENTERED AT 23:41:19 ON 09 DEC 2006  
1 S US 2004-0230057 /PN

FILE 'REGISTRY' ENTERED AT 23:41:52 ON 09 DEC 2006

L2 FILE 'CAPLUS' ENTERED AT 23:41:57 ON 09 DEC 2006  
TRA L1 1- RN : 16 TERMS

L3 FILE 'REGISTRY' ENTERED AT 23:41:57 ON 09 DEC 2006  
16 SEA L2  
L4 8 S L3 AND QUINOLIN?

FILE 'CAPLUS' ENTERED AT 23:43:05 ON 09 DEC 2006

L5 FILE 'CAPLUS' ENTERED AT 23:43:13 ON 09 DEC 2006  
2 S L4

=> log y		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	6.60	27.07
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-1.50	-1.50

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NEWS 20	NOV 10	STN Express with Discover! free maintenance release Version



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NEWS 21 NOV 13 CA/Capplus pre-1967 chemical substance index entries enhanced  
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NEWS 22 NOV 20 CAS Registry Number crossover limit increased to 300,000 in  
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NEWS 23 NOV 20 CA/Capplus to MARPAT accession number crossover limit increased  
to 50,000  
NEWS 24 NOV 20 CA/Capplus patent kind codes will be updated  
NEWS 25 DEC 01 CAS REGISTRY updated with new ambiguity codes

NEWS EXPRESS NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT  
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.

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NEWS IPC8 For general information regarding STN implementation of IPC 8  
NEWS X25 X.25 communication option no longer available

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DICTIONARY FILE UPDATES: 10 DEC 2006 HIGHEST RN 915124-84-4

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experimental property data in the original document. For information  
on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=> s quinolinium and indol(5w)ylidene and propenyl

33555 QUINOLINIUM  
450603 INDOL  
790140 YLIDENE  
54339 INDOL(5W)YLIDENE  
835652 PROPENYL

L1 248 QUINOLINIUM AND INDOL(5W)YLIDENE AND PROPENYL

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
----------------------	------------	-------

FULL ESTIMATED COST

ENTRY      SESSION  
19.92      20.13

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FILE LAST UPDATED: 10 Dec 2006 (20061210/ED)

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=> s l1  
L2            67 L1  
  
=> s (optical or laser or information) and l2  
    921106 OPTICAL  
      21 OPTICALS  
    921115 OPTICAL  
      (OPTICAL OR OPTICALS)  
    541625 LASER  
    166010 LASERS  
    555530 LASER  
      (LASER OR LASERS)  
    430163 INFORMATION  
      3151 INFORMATIONS  
    432678 INFORMATION  
      (INFORMATION OR INFORMATIONS)  
L3            8 (OPTICAL OR LASER OR INFORMATION) AND L2  
  
=> d all 1-8

L3    ANSWER 1 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN  
AN    2005:618741 CAPLUS <<LOGINID::20061211>>  
DN    143:195246  
ED    Entered STN: 18 Jul 2005  
TI    Dyes for \*\*\*optical\*\*\* recording medium  
IN    Guo, Chaonan; Jiang, Songgui  
PA    Laide Science & Technology Co., Ltd., Peop. Rep. China  
SO    Faming Zhuanli Shenqing Gongkai Shuomingshu, No pp. given  
      CODEN: CNXXEV  
DT    Patent  
LA    Chinese  
IC    ICM C09B057-00  
      ICS G11B007-24  
CC    41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)  
      Section cross-reference(s): 74

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1552768	A	20041208	CN 2003-140813	20030604
PRAI	CN 2003-140813		20030604		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
CN 1552768	ICM	C09B057-00

OS MARPAT 143:195246  
GI

AB The dye I and II (A = arom. or polycyclic arom. carbonyl; B 1 = H, OH, alkoxy, halogen, nitro, nitroso, (un)substituted amino, (un)substituted sulfanilamido; R1, R2 = (un)substituted linear or branched alkyl, alkenyl, aralkyl, alkoxy, alkoxy, alkylhydroxy, alkylamino, alkylcarbonyl, alkylsulfamoyl, alkylalkoxy, alkylhalo, alkylsulfonyl or alkylcarboxy; X- = anion) is useful for \*\*\*optical\*\*\* recording medium.

IT Cycloalkenes  
RL: TEM (Technical or engineered material use); USES (Uses)  
(polymers, substrate; dyes for \*\*\*optical\*\*\* recording medium)

IT 7429-90-5, Aluminum, uses 7440-21-3, Silicon, uses 7440-22-4, Silver,  
uses 7440-50-8, Copper, uses 7440-57-5, Gold, uses 11144-43-7,  
Silver alloys, copper 37263-66-4, Silver alloys, titanium- 50950-97-5,  
Silver alloys, chromium-

IT	***794518-86-8***	***794518-88-0***	***794518-89-1***
	***794518-91-5***	***794518-93-7***	***794518-97-1***
	***794518-98-2***	***862014-00-4***	

IT 9011-14-7, PMMA  
RL: TEM (Technical or engineered material use); USES (Uses)  
(substrates; dyes for \*\*\*optical\*\*\* recording medium)

Section cross-reference(s) : 74

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004230057	A1	20041118	US 2004-820600	20040407
TW 244494	B1	20051201	TW 2003-92113053	20030514
TW 2003-92113053	A	20030514		

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004230057	ICM	C07D209-56
	ICS	G11B007-24; C07D453-02

INCL 546134000; 430270180; 546135000; 548427000; 548469000  
 IPCI C07D0209-56 [ICM,7]; C07D0209-00 [ICM,7,C\*];  
 G11B0007-24 [ICS,7]; C07D0453-02 [ICS,7]; C07D0453-00  
 [ICS,7,C\*]  
 IPCR C07D0401-00 [I,C\*]; C07D0401-06 [I,A]; G11B0007-24  
 [I,C\*]; G11B0007-24 [N,A]; G11B0007-247 [I,A]  
 NCL 546/134.000; 430/270.180; 546/135.000; 548/427.000;  
 548/469.000  
 ECLA C07D401/06+215+209  
 TW 244494 IPCI C09B0025-00 [ICS,7]  
 IPCR C07D0401-00 [I,C\*]; G11B0007-24 [I,C\*]; C07D0401-06  
 [I,A]; G11B0007-24 [N,A]; G11B0007-247 [I,A]

OS MARPAT 141:425348

GI

/ Structure 16 in file .gra /

AB An \*\*\*optical\*\*\* recording medium dye has the structure I where A is  
 an arom. group or a polycyclic arom. group; B1 = H, OH, alkyloxy, halogen,  
 NO2, nitroso, a substituted and unsubstituted amine group, a substituted  
 or unsubstituted sulfamoyl; R1, R2 = substituted or unsubstituted,  
 straight chain or branched alkyl, alkenyl, aralkyl, alkoxy carbonyl,  
 alkoxy carboxyl, alkoxy, alkyl hydroxyl, alkylamino, alkyl carbamoyl,  
 alkyl sulfamoyl, alkylalkoxy, alkyl halide, alkylsulfonyl or  
 alkylcarboxyl; and X- is anion.

ST \*\*\*optical\*\*\* recording medium photo dye

IT Dyes

\*\*\*Optical\*\*\* recording materials  
 (dye \*\*\*optical\*\*\* and thermal property required for  
 \*\*\*optical\*\*\* recording medium)

IT Cycloalkenes

RL: TEM (Technical or engineered material use); USES (Uses)  
 (polymers, substrate; dye \*\*\*optical\*\*\* and thermal property  
 required for \*\*\*optical\*\*\* recording medium)

IT Polycarbonates, uses

Polyesters, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
 (substrate; dye \*\*\*optical\*\*\* and thermal property required for  
 \*\*\*optical\*\*\* recording medium)

IT 7429-90-5, Aluminum, uses 7440-22-4, Silver, uses 7440-50-8, Copper,  
 uses 7440-57-5, Gold, uses 11144-43-7 37263-66-4 50950-97-5

RL: TEM (Technical or engineered material use); USES (Uses)  
 (antireflection layer; dye \*\*\*optical\*\*\* and thermal property  
 required for \*\*\*optical\*\*\* recording medium)

IT \*\*\*794518-86-8\*\*\* \*\*\*794518-88-0\*\*\* \*\*\*794518-89-1\*\*\*

\*\*\*794518-91-5\*\*\* \*\*\*794518-93-7\*\*\* \*\*\*794518-95-9\*\*\*

\*\*\*794518-97-1\*\*\* \*\*\*794518-98-2\*\*\*

RL: PRP (Properties); TEM (Technical or engineered material use); USES  
 (Uses)

(dye \*\*\*optical\*\*\* and thermal property required for  
 \*\*\*optical\*\*\* recording medium)

IT 9011-14-7, Polymethyl methacrylate

RL: TEM (Technical or engineered material use); USES (Uses)  
 (substrate; dye \*\*\*optical\*\*\* and thermal property required for  
 \*\*\*optical\*\*\* recording medium)

L3 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:485828 CAPLUS <<LOGINID::20061211>>

DN 141:39728

ED Entered STN: 17 Jun 2004

TI Hydrophilic fluorescent marker dyes based on benzopyrrolo-polymethines

IN Czerney, Peter; Schweder, Bernd; Wenzel, Matthias; Frank, Wilhelm

PA Dyomics GmbH, Germany

SO Eur. Pat. Appl., 24 pp.

CODEN: EPXXDW

DT Patent

LA German

IC ICM C09B023-02

ICS G01N033-533; G01N033-58

CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic

Sensitizers)

Section cross-reference(s): 9

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1428858	A1	20040616	EP 2003-28306	20031209
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	DE 10258150	A1	20040708	DE 2002-10258150	20021210
	US 2004162423	A1	20040819	US 2003-732928	20031210
	US 6924372	B2	20050802		
PRAI	DE 2002-10258150	A	20021210		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	EP 1428858	ICM	C09B023-02
		ICS	G01N033-533; G01N033-58
		IPCI	C09B0023-02 [ICM,7]; C09B0023-00 [ICM,7,C*]; G01N0033-533 [ICS,7]; G01N0033-58 [ICS,7]
		IPCR	C09B0023-00 [I,C*]; C09B0023-02 [I,A]; G01N0033-533 [I,C*]; G01N0033-533 [I,A]
		ECLA	C09B023/02; G01N033/533
	DE 10258150	IPCI	C09B0023-12 [ICM,7]; C09B0023-00 [ICM,7,C*]; A61K0049-00 [ICS,7]; C12Q0001-68 [ICS,7]
		IPCR	C09B0023-00 [I,C*]; C09B0023-02 [I,A]; G01N0033-533 [I,C*]; G01N0033-533 [I,A]
		ECLA	C09B023/02; G01N033/533
	US 2004162423	IPCI	C08B0037-16 [ICM,7]; C08B0037-00 [ICM,7,C*]; C07D0405-14 [ICS,7]; C07D0405-00 [ICS,7,C*]
		IPCR	C09B0023-00 [I,C*]; C09B0023-02 [I,A]; G01N0033-533 [I,A]; G01N0033-533 [I,C*]
		NCL	536/046.000; 546/277.400; 548/414.000; 548/454.000
		ECLA	C09B023/02; G01N033/533

OS MARPAT 141:39728

GI

/ Structure 17 in file .gra /

AB The title dyes [I and II; R1-R14 = H, alkyl, tert-alkyl, (carboxy)aryl, (hetero)cycloalkyl, alkoxy, OH, NO<sub>2</sub>, cyano, etc; R1R2, R2R3, R3R4, R5R7, R9R10, R11R12, R12R13 can form (hetero)aliph. or arom. ring; .gtoreq.1 of R1-R14 can contain solubilizing or ionizable or ionized substituent(s); .gtoreq.1 R1-R14 can contain reactive groups for covalent bonding to substrates; n = 0, 1-3; provisos are given] having improved hydrophilicity, increased extinction coeffs. and photo- and storage stability are useful for \*\*\*optical\*\*\* marking and detn. of amino acids, proteins, antibodies, nucleic acids, DNA, RNA, polymers, drugs, etc. For example, adding 75 .mu.L HC(OMe)<sub>3</sub> in 1 mL pyridine to a soln. of 180 mg 2-tert-butyl-7-diethylamino-4-methylchromenylium tetrafluoroborate and 242 mg 3-(3-ethoxycarbonylpropyl)-2,3-dimethyl-5-sulfonato-1-(3-sulfonatopropyl)-3H-indolium Na salt in 50 mL Ac<sub>2</sub>O, stirring the mixt. for 30 min at 140.degree., evapg. the reaction mixt., refluxing the solid residue in a mixt. of 10 mL acetone and 10 mL of 2 M HCl and neutralizing with NaHCO<sub>3</sub> gave 145 mg of carboxypropyl-functional polymethine dye [II; R1 = R4 = R5 = R7 = R8 = R9 = R12 = R13 = H, R2 = R3 = Et, R6 = Me<sub>3</sub>C, R10 = O<sub>3</sub>S(CH<sub>2</sub>)<sub>3</sub>, R11 = SO<sub>3</sub>, R14 = Me, n = 1] as Na salt. This (15 mg) was converted to active ester with 4 mg N-hydroxysuccinimide in the presence of 14 mg dicyclohexyl carbodiimide and used to prep. a streptavidin conjugate showing narrowed aggregation bands in UV-Vis spectrum.

ST hydrophilic benzopyrylopolymethine fluorescent marker dye prepn;

IT streptavidin conjugate benzopyrylopolymethine fluorescent marker dye

Cell

Drugs

Fluorescent dyes

(hydrophilic fluorescent marker dyes based on benzopyrylo-polymethines)

IT Amino acids, biological studies

Antibodies and Immunoglobulins

DNA

Lipids, biological studies  
Nucleic acids  
Proteins  
RNA  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(hydrophilic fluorescent marker dyes based on benzopyrylo-polymethines)

IT Polymers, biological studies  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(oligomeric; hydrophilic fluorescent marker dyes based on  
benzopyrylo-polymethines)

IT 149-73-5, Trimethyl orthoformate 4485-89-6  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(condensation with chromenylium and indolium salts; hydrophilic  
fluorescent marker dyes based on benzopyrylo-polymethines)

IT 704891-92-9  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(condensation with chromenylium salt and tri-Me orthoformate;  
hydrophilic fluorescent marker dyes based on benzopyrylo-polymethines)

IT 145821-07-4 153364-00-2 482379-39-5 704891-94-1 704891-96-3  
704891-98-5 704892-00-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(condensation with indolium salt and tri-Me orthoformate; hydrophilic  
fluorescent marker dyes based on benzopyrylo-polymethines)

IT 6066-82-6, N-Hydroxysuccinimide  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(esterification of benzopyrylo-polymethines; hydrophilic fluorescent  
marker dyes based on benzopyrylo-polymethines)

IT 9013-20-1D, Streptavidin, conjugate with benzopyrylo-polymethine deriv.  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)  
(hydrophilic fluorescent marker dyes based on benzopyrylo-polymethines)

IT 704891-70-3P 704891-72-5P \*\*\*704891-75-8P\*\*\* 704891-77-0P  
704891-81-6P 704891-83-8P 704891-85-0P 704891-87-2P 704891-89-4P  
704891-91-8P \*\*\*890317-41-6P\*\*\*  
RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); BIOL  
(Biological study); PREP (Preparation); USES (Uses)  
(hydrophilic fluorescent marker dyes based on benzopyrylo-polymethines)

IT 704891-69-0P 704891-71-4P \*\*\*704891-74-7P\*\*\* 704891-76-9P  
\*\*\*704891-78-1P\*\*\* 704891-80-5P 704891-82-7P 704891-84-9P  
704891-86-1P 704891-88-3P 704891-90-7P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT  
(Reactant or reagent)  
(prepn. and esterification with N-hydroxysuccinimide; hydrophilic  
fluorescent marker dyes based on benzopyrylo-polymethines)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE  
(1) Czerney, P; WO 0053678 A 2000 CAPLUS  
(2) Czerney, P; WO 0190253 A 2001 CAPLUS

L3 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN  
AN 1995:118681 CAPLUS <<LOGINID::20061211>>  
DN 122:92949  
ED Entered STN: 08 Nov 1994  
TI \*\*\*Optical\*\*\* recording medium containing cyanine dye  
IN Yoshizawa, Atsushi; Araki, Yasushi; Matsui, Fumio; Yokoyama, Yoshe; Jinho,  
Akira; Okazaki, Yasuki  
PA Pioneer Electronic Corp, Japan; Nippon Kanko Shikiso Kenkyusho  
SO Jpn. Kokai Tokkyo Koho, 16 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM B41M005-26  
ICS C09B027-00; G11B007-24; G11C013-04  
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s): 27

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI JP 06199045	A2	19940719	JP 1993-2139	19930108
PRAI JP 1993-2139		19930108		

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

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JP 06199045 ICM B41M005-26  
ICS C09B027-00; G11B007-24; G11C013-04  
IPCI B41M0005-26 [ICM,5]; C09B0027-00 [ICS,5]; G11B0007-24 [ICS,5]; G11C0013-04 [ICS,5]

OS MARPAT 122:92949

GI For diagram(s), see printed CA Issue.

AB The medium comprises a transparent substrate coated with a recording film contg. a cyanine dye I, II, III, or IV (R1-2 = alkyl, aryl, alkoxy; W1-2 = halo, H, substituent such as alkyl, alkoxy, aryl, alkoxycarbonyl, sulfonylalkyl, CN; Y = halo, H, substituent such as alkyl; X- = counter ion such as I-, Br-, ClO4-, BF4-, PF6-, SbF6-, MeSO4-, MeC6H4SO3-; n = 0-2). The medium showed good sensitivity and reflection to short wave (.apprxeq.680 nm) \*\*\*laser\*\*\*

ST \*\*\*optical\*\*\* recording org cyanine dye

IT Recording materials  
( \*\*\*optical\*\*\* , \*\*\*optical\*\*\* recording material contg. cyanine dye)

IT 18371-31-8 134984-32-0 139265-68-2 159461-89-9 159461-90-2  
\*\*\*159461-91-3\*\*\* 159461-93-5

RL: DEV (Device component use); USES (Uses)  
( \*\*\*optical\*\*\* recording material contg. cyanine dye)

L3 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1990:66671 CAPLUS <<LOGINID::20061211>>

DN 112:66671

ED Entered STN: 17 Feb 1990

TI Photosensitive composition for electrophotographic photoconductors and \*\*\*optical\*\*\* recording media

IN Kato, Eiichi; Ishii, Kazuo

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 24 pp.  
CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03G005-06  
ICS B41M005-26; C09B023-00

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01126655	A2	19890518	JP 1987-284449	19871111
PRAI JP 1987-284449		19871111		

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

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JP 01126655 ICM G03G005-06  
ICS B41M005-26; C09B023-00  
IPCI G03G0005-06 [ICM,4]; B41M0005-26 [ICS,4]; C09B0023-00 [ICS,4]

GI

/ Structure 18 in file .gra /

AB The title photosensitive compn. contains I and/or II [Z, Z1 = O, S, Se, Te, hydrocarbylimino; X, X1 = a group of atoms necessary to form a pyran, benzopyran, naphthopyran, thiopyran, 5- or 6-membered N heterocycle; Y1-Y4 = H or an aliph. or arom. group; R, R3 = H, an aliph. group; R1, R2, R4, R5 = H or an aliph. or arom. group, R1R2, R4R5 together may form an aliph. or arom. ring; A1, A2 = an (substituted) arom. or heterocyclic group, III, IV (R6-R12 = H, halo, a monovalent org. radical); L1-L4 = a methine group; m, n = 0, 1; p, q = 0-2; Q1, Q2 = an anion; r = 1, 2; the compd. may form an inert salt when r = 1]. Electrophotog. photoconductors or \*\*\*optical\*\*\* recording media contg. I and/or II show high sensitivity to .gtoreq.750 nm \*\*\*laser\*\*\* beams and an improved signal-to-noise ratio.

ST electrophotog photoconductor thiopyrylium salt; \*\*\*optical\*\*\* recording thiopyrylium salt; photosensitive compn thiopyrylium salt;

thiopyrylium salt photosensitizer electrophotog  
 IT Electrophotographic photoconductors  
 (photosensitive compns. contg. thiopyrylium dye for)  
 IT Electrophotographic sensitizers  
 (thiopyrylium dyes as)  
 IT Recording materials  
 ( \*\*\*optical\*\*\* , thiopyrylium dyes for)  
 IT 124795-65-9 124795-67-1 124795-69-3 124795-71-7 124795-73-9  
 124795-75-1 124795-77-3 124795-79-5 124795-81-9 124795-83-1  
 124795-84-2 124795-86-4 124795-88-6 124795-89-7 124795-91-1  
 124795-92-2 124795-94-4 \*\*\*124795-95-5\*\*\* 124795-96-6  
 124795-98-8 124796-00-5 124796-02-7 124796-04-9 124796-05-0  
 124796-07-2 124796-09-4 124796-11-8 124796-12-9 124796-13-0  
 124796-14-1 124796-16-3 124796-18-5 124796-20-9 124796-21-0  
 124796-23-2 124796-25-4 124796-26-5 124848-76-6 124848-77-7  
 124848-78-8 124848-80-2  
 RL: USES (Uses)  
 (photosensitive compns. contg., for electrophotog. photoconductors and  
 \*\*\*optical\*\*\* recording media)

L3 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1986:415350 CAPLUS <<LOGINID::20061211>>  
 DN 105:15350  
 ED Entered STN: 13 Jul 1986  
 TI \*\*\*Optical\*\*\* recording medium  
 IN Namba, Kenryo; Asami, Shigeru; Aoi, Toshiki; Takahashi, Kazuo; Kuroiwa,  
 Akihiko  
 PA TDK Corp., Japan  
 SO PCT Int. Appl., 133 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 IC ICM B41M005-26  
 ICS G11B007-24  
 CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 41

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 8505078	A1	19851121	WO 1985-JP253	19850502
	W: US				
	RW: DE, FR, GB, NL				
	JP 60234886	A2	19851121	JP 1984-90748	19840507
	JP 05026670	B4	19930416		
	JP 60234892	A2	19851121	JP 1984-91567	19840508
	JP 05032231	B4	19930514		
	JP 61011292	A2	19860118	JP 1984-132702	19840627
	EP 181941	A1	19860528	EP 1985-902157	19850502
	EP 181941	B1	19900124		
	R: DE, FR, GB, NL				
	US 4713314	A	19871215	US 1986-827928	19860204
PRAI	JP 1984-90748	A	19840507		
	JP 1984-91567	A	19840508		
	JP 1984-132702	A	19840627		
	WO 1985-JP253	W	19850502		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 8505078	ICM	B41M005-26
	ICS	G11B007-24
	IPCI	B41M0005-26 [ICM,4]; G11B0007-24 [ICS,4]
	IPCR	G11B0007-24 [I,C*]; G11B0007-247 [I,A]
JP 60234886	IPCI	B41M0005-26 [ICM,4]; G11B0007-24 [ICS,4]; G11C0013-04 [ICS,4]
	IPCR	G11B0007-24 [I,C*]; G11B0007-247 [I,A]
JP 60234892	IPCI	B41M0005-26 [ICM,4]; C09B0023-00 [ICS,4]; G11B0007-24 [ICS,4]; G11C0013-04 [ICS,4]
	IPCR	G11B0007-24 [I,C*]; G11B0007-247 [I,A]
JP 61011292	IPCI	B41M0005-26 [ICM,4]; G03C0001-72 [ICS,4]; G11B0007-24 [ICS,4]
	IPCR	G11B0007-24 [I,C*]; G11B0007-247 [I,A]



EP 181941 IPCI B41M0005-26 [ICM,4]; G11B0007-24 [ICS,4]  
 IPCR G11B0007-24 [I,C\*]; G11B0007-247 [I,A]  
 US 4713314 IPCI G03C0001-72 [ICM,4]; G11B0007-24 [ICS,4]  
 IPCR G11B0007-24 [I,C\*]; G11B0007-247 [I,A]  
 NCL 430/270.190; 346/135.100; 430/270.200; 430/270.210;  
 430/338.000; 430/346.000; 430/945.000; 430/964.000

AB Claimed \*\*\*optical\*\*\* recording materials contain a cyanine dye and a salt of a cyanine dye cation with a quencher anion. The recording materials give recorded disks with good durability (for repeated readout) and high readout signal/noise ratio.

ST \*\*\*laser\*\*\* recording disk cyanine dye; quencher cyanine dye salt

IT Recording materials  
 ( \*\*\*optical\*\*\* , \*\*\*laser\*\*\* -sensitive, contg. cyanine dye-quencher salts)

IT 102723-18-2 102723-19-3 102723-20-6 102723-22-8 102723-24-0  
 102723-26-2 102723-28-4 \*\*\*102723-30-8\*\*\* 102723-31-9  
 102723-33-1 102779-19-1  
 RL: USES (Uses)  
 ( \*\*\*laser\*\*\* recording medium contg. cyanine dye and)

IT 16595-48-5 19764-96-6 22668-60-6 23178-67-8 93911-28-5  
 95264-78-1 96122-07-5 101703-26-8 101899-99-4 102604-91-1  
 102621-76-1 102643-64-1 102643-65-2 102678-44-4  
 RL: USES (Uses)  
 ( \*\*\*laser\*\*\* recording medium contg. quencher-cyanine dye ionic assocn. compd. and)

IT 98970-23-1P 98970-24-2P 98970-26-4P 98970-27-5P 98970-34-4P  
 98970-35-5P 98970-37-7P 98970-38-8P 99032-42-5P 101176-87-8P  
 102644-00-8P 102644-01-9P 102644-02-0P 102644-03-1P 102648-56-6P  
 RL: PREP (Preparation)  
 (prepn. of, for use in \*\*\*laser\*\*\* recording medium)

IT 15492-42-9 19764-96-6 22668-60-6 23178-67-8 93793-45-4  
 93953-72-1 94140-35-9 95681-14-4 95973-56-1 95973-58-3  
 97178-64-8 97428-30-3 102567-12-4 102567-13-5 102567-14-6  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, photostabilized dye from, for \*\*\*laser\*\*\* recording disks)

L3 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1983:18100 CAPLUS <<LOGINID::20061211>>  
 DN 98:18100  
 ED Entered STN: 12 May 1984  
 TI 2,3,3-Trimethyl-3H-pyrrolo[3,2-c]quinolines and polymethine dyes made of them  
 AU Mikhailenko, F. A.; Shevchuk, L. I.; Tolmacheva, V. S.; Babichev, F. S.  
 CS Kiev. Gos. Univ., Kiev, 252017, USSR  
 SO Khimiya Geterotsiklicheskikh Soedinenii (1982), (7), 948-51  
 CODEN: KGSSAQ; ISSN: 0453-8234  
 DT Journal  
 LA Russian  
 CC 41-6 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)  
 Section cross-reference(s): 28, 73  
 OS CASREACT 98:18100  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Trimethylpyrroloquinolines (I; R = H, OMe), potentially useful in \*\*\*laser\*\*\* technol., were prep'd. by Fischer indolization of 3-methyl-2-butanone (4-quinolinyl)hydrazone [83958-36-5] and 3-methyl-2-butanone (3-methoxy-4-quinolinyl)hydrazone [83958-37-6] and were quaternized with Me<sub>2</sub>SO<sub>4</sub>. The quinoline N underwent quaternization. Reactions of quaternized I (counterions ClO<sub>4</sub>- or MeOSO<sub>3</sub>-) with 2-(formylmethylene)-1,3,3-trimethylindoline [84-83-3] or AcOCH(OEt)<sub>2</sub> [14036-06-7] gave polymethine dyes II and III, resp., (R = H, OMe). Changes in the absorption spectra of II and III in solns. of different acidities were discussed.

ST pyrroloquinoline trimethyl prep'n quaternization; methylpyrroloquinoline prep'n quaternization; quaternization trimethylpyrroloquinoline;

polymethine dye trimethylpyrroloquinoline deriv; absorption spectrum  
 acidity polymethine dye; cyanine dye absorption spectrum acidity;  
 \*\*\*laser\*\*\* polymethine dye

IT Dyes, cyanine  
 (trimethine, pyrroloquinoline derivs., prepn. and absorption spectra  
 of)

IT \*\*\*Lasers\*\*\*  
 (dye, polymethines for)

IT 83958-36-5P 83958-37-6P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (prepn. and cyclization of)

IT 83958-38-7P 83958-39-8P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and quaternization with di-Me sulfate)

IT 83958-47-8P 83958-49-0P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (prepn. and reactions of, with diethoxymethyl acetate and  
 (formylmethylene)trimethylindoline)

IT 83958-40-1P 83958-41-2P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)

IT \*\*\*83958-43-4P\*\*\* \*\*\*83958-45-6P\*\*\* 83958-51-4P 83958-52-5P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn., quaternization and visible spectra of)

IT 14036-06-7  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with tetramethylpyrroloquinolinium Me sulfates)

IT 84-83-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with tetramethylpyrroloquinolinium perchlorates)

L3 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1977:148784 CAPLUS <<LOGINID::20061211>>  
 DN 86:148784  
 ED Entered STN: 12 May 1984  
 TI Silver halide photographic emulsions for use with \*\*\*laser\*\*\* light  
 IN Habu, Teiji; Nakajima, Tomio; Mine, Kiyomitsu; Fujimori, Noboru; Sakamoto,  
 Eiichi  
 PA Konishiroku Photo Industry Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese  
 IC G03C001-18  
 CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic Processes)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 51115822	A2	19761012	JP 1975-40961	19750403
	JP 55002611	B4	19800121		
PRAI	JP 1975-40961	A	19750403		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 51115822	IC	G03C001-18
	IPCI	G03C0001-18; G03C0001-14 [C*]
	IPCR	G03C0001-12 [I,C*]; G03C0001-12 [I,A]; G03C0001-14 [I,C*]; G03C0001-18 [I,A]

GI For diagram(s), see printed CA Issue.

AB Ag halide photog. emulsions for use with ruby \*\*\*laser\*\*\* light (694.3 nm) are obtained by using a spectral sensitizing dye with the formula I [Z1 = atoms required to complete a 4-quinoline ring; Z2 = atoms required to complete a thiazole, benzothiazole, naphthothiazole, selenazole, benzoselenazole, naphthoselenazole, oxazole, benzoxazole, naphthooxazole, 3H-benzindole or 2-quinoline ring; R,R1 = lower alkyl; R2 = lower alkyl or aryl; R3 = H, lower alkyl or aryl; X- = anion; m, n, p = 1,2]. Thus, a Ag(Br, I) (AgI 1 mol %) emulsion prepd. in the conventional manner was sensitized with the dye II 50 mg/mol Ag halide, coated on a pretreated cellulose triacetate support, dried, exposed for 10-5 s with a ruby \*\*\*laser\*\*\* through a neutral gray wedge and developed to give a

relative sensitivity of 115 vs. 100 when the film was exposed for 1 s with the red light from a W lamp with an interference filter.

ST \*\*\*laser\*\*\* sensitive photog emulsion; carbocyanine dye photog sensitizer

IT Photographic sensitizers  
(carbocyanine dyes as, for ruby \*\*\*laser\*\*\* -sensitive silver halide emulsions)

IT Photographic emulsions  
(ruby \*\*\*laser\*\*\* -sensitive, contg. carbocyanine dyes)

IT 20591-23-5 29704-16-3 51257-37-5 57752-49-5 62312-13-4  
62312-14-5 62312-15-6 62312-16-7 \*\*\*62312-17-8\*\*\* 62312-18-9  
62312-19-0 62312-20-3 62312-21-4 62312-22-5 62314-14-1  
62355-91-3

RL: TEM (Technical or engineered material use); USES (Uses)  
(photog. sensitizer, for ruby \*\*\*laser\*\*\* -sensitive silver halide emulsions)

=> d his

(FILE 'HOME' ENTERED AT 08:03:40 ON 11 DEC 2006)

FILE 'REGISTRY' ENTERED AT 08:03:48 ON 11 DEC 2006  
L1 248 S QUINOLINIUM AND INDOL(5W)YLIDENE AND PROPENYL

FILE 'CAPLUS' ENTERED AT 08:04:53 ON 11 DEC 2006  
L2 67 S L1  
L3 8 S (OPTICAL OR LASER OR INFORMATION) AND L2

=> s l2 and photographic  
94624 PHOTOGRAPHIC  
5 PHOTOGRAPHICS  
94629 PHOTOGRAPHIC  
(PHOTOGRAPHIC OR PHOTOGRAPHICS)  
72235 PHOTOG  
137 PHOTOGS  
72338 PHOTOG  
(PHOTOG OR PHOTOGS)  
112049 PHOTOGRAPHIC  
(PHOTOGRAPHIC OR PHOTOG)  
L4 9 L2 AND PHOTOGRAPHIC

=> d all 1-19

L4 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN  
AN 1987:524468 CAPLUS <<LOGINID::20061211>>  
DN 107:124468  
ED Entered STN: 05 Oct 1987  
TI Silver halide \*\*\*photographic\*\*\* photosensitive materials  
IN Takahashi, Nensho; Kunieda, Sunao; Kagawa, Nobuaki; Kamitakahara, Atsushi  
PA Konishiroku Photo Industry Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 28 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03C001-28  
ICS C07D421-06  
ICI C07D421-06, C07D277-00, C07D293-00; C07D421-06, C07D263-00, C07D293-00  
CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 61282834	A2	19861213	JP 1985-124958	19850608
PRAI JP 1985-124958		19850608		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 61282834	ICM	G03C001-28
	ICS	C07D421-06
	ICI	C07D421-06, C07D277-00, C07D293-00; C07D421-06, C07D263-00, C07D293-00

IPCI G03C0001-28 [ICM,4]; G03C0001-08 [ICM,4,C\*];  
C07D0421-06 [ICS,4]; C07D0421-06 [ICI,4]; C07D0277-00  
[ICI,4]; C07D0293-00 [ICI,4]; C07D0421-06 [ICI,4];  
C07D0421-00 [ICI,4,C\*]; C07D0263-00 [ICI,4];  
C07D0293-00 [ICI,4]

IPCR G03C0001-08 [I,C\*]; G03C0001-29 [I,A]

GI For diagram(s), see printed CA Issue.

AB The claimed \*\*\*photog\*\*\* materials contain .gtoreq.1 emulsion layers which are spectrally super-sensitized by using a dye I [Z1, Z2 = pyrroline, pyridine, indolenine, benzimidazole, oxazole, benzoxazole, naphthoxazole, thiazoline, thiazole, benzothiazole, naphthothiazole, selenazole, benzoselenazole, or naphthoselenazole ring; R1, R2 = aliph. moiety with/without O or S linkage(s); .gtoreq.1 of R1 and R2 is substituted with OH, CO2H, or SO3H group; X- = anion; n = 0, 1] together with a tellurazole deriv. dye. The tellurazole dye is selected from II and III [R3, R4 = H, substituent; .gtoreq.1 of R3, R4 = alkyl, aryl; R5, R11 = quaternary group; R6, R10 = H, alkyl, aralkyl, aryl, heterocyclyl, amino, CN, alkylthio, arylthio, alkoxy, aryloxy; R7-R9 = halo, acidic ring, R6; R12-R14 = H, alkyl, aralkyl, aryl, alkylthio, cyano, arylthio, alkoxy, aryloxy; Q = heterocycle; Y- = anion; E = acidic ring; R3R4, R4R5, R5R6, R6R10, R7R9, R10R11, and R12R14 combinations may form rings; m, p, s = 0, 1; r = 0, pos. integer detd. by the charge; g = 0, 1, 2].

ST supersensitization silver halide \*\*\*photog\*\*\* emulsion; dye sensitizer tellurazole deriv; cyanine dye \*\*\*photog\*\*\* sensitizer

IT 60760-43-2

RL: USES (Uses)

(cyanine dye-tellurazole deriv. dye mixts. as)

IT 55425-23-5 60760-37-4 60760-38-5 60760-40-9 60760-43-2

60760-44-3 60760-50-1 108465-44-7 109057-17-2 110208-04-3

110208-05-4 110208-06-5 110208-08-7 110208-09-8 \*\*\*110208-10-1\*\*\*

110208-11-2 110208-12-3 110208-13-4 110208-14-5 110208-15-6

110225-55-3

RL: USES (Uses)

( \*\*\*photog\*\*\* . supersensitizer compns. contg.)

IT 102365-43-5P 108286-34-6P 108410-79-3P 108464-92-2P 108464-93-3P

108464-94-4P 108465-25-4P 108465-26-5P 108497-53-6P 108497-55-8P

109625-28-7P 110208-03-2P

RL: PREP (Preparation)

(prepn. of, as \*\*\*photog\*\*\* . sensitizer dye)

IT 78-59-1, Isophorone 122-51-0 333-27-7 622-15-1, Diphenylformamidine

5718-83-2 55425-51-9 70867-59-3 75504-95-9 97425-67-7,

2,3,5-Trimethylbenzotellurazolium trifluoromethanesulfonate 108285-75-2

108285-76-3 108286-35-7, 3-(5-Chloro-2-(2-methylthio-1-propenyl)-3-

benzothiazole)propane sulfonate inner salt 108465-18-5 108465-20-9

108465-21-0 108465-40-3 108465-41-4 108465-42-5 108465-43-6,

5-Fluoro-2-methylbenzotellurazole 108497-54-7 108497-78-5

108497-86-5 108497-87-6 110126-58-4

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, \*\*\*photog\*\*\* . sensitizer dye from)

L4 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1979:440912 CAPLUS <<LOGINID::20061211>>

DN 91:40912

ED Entered STN: 12 May 1984

TI Spectral sensitizing dyes

IN Exekiel, Arron David; Ficken, Geoffrey Ernest; Steiger, Rolf; Reber, Jean Francois

PA Ciba-Geigy A.-G., Switz.

SO Brit., 26 pp. Division of Brit. 1,529,201.

CODEN: BRXXAA

DT Patent

LA English

IC C09B023-00; C09B023-02; C09B023-04; C09B023-06

CC 40-12 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)

Section cross-reference(s): 28

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 1529202	A	19781018	GB 1977-38692	19760220
	GB 1529201	A	19781018	GB 1975-11187	19760220
	BE 839641	A1	19760917	BE 1976-165229	19760317
	US 4138551	A	19790206	US 1977-781383	19770325

PRAI	GB 1975-11187	A	19750318
	CH 1975-4847	A	19750416
	CH 1976-2100	A	19760220
	US 1976-665981	A3	19760311

# CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
GB 1529202	IC	C09B023-00; C09B023-02; C09B023-04; C09B023-06
	IPCI	C09B0023-12; C09B0023-00; C09B0023-02; C09B0023-04; C09B0023-06; C09B0023-10
GB 1529201	IPCI	G03C0001-12; G03C0001-14; G03C0001-20; G03C0001-22; G03C0001-26
BE 839641	IPCI	G03C
	IPCR	G03C0001-12 [I,C*]; G03C0001-12 [I,A]; G03C0001-705 [I,C*]; G03C0001-705 [I,A]
US 4138551	IPCI	C09B0023-06; C09B0023-04; C09B0023-00 [C*]
	IPCR	G03C0001-12 [I,A]; G03C0001-12 [I,C*]; G03C0001-705 [I,A]; G03C0001-705 [I,C*]
	NCL	544/212.000; 544/083.000; 544/113.000

GI

/ Structure 19 in file .gra /

AB The prepn. is described of spectral sensitizing dinuclear cyanine and merocyanine dyes which have attached either to a heterocyclic nucleus or to the methine chain an azine group which comprises .gtoreq.1 leaving group and which is reactive with a hydrophilic colloid which contains an SH, NH2, NH, OH, CO2H, or CONRR1 (R, R1 = H, lower alkyl) group. Thus, the dye I [70591-63-8] was prepd. from 2-acetanilidovinyl-3-ethylbenzthiazolium iodide [35080-47-8] by sequential treatment with rhodanine [141-84-4] and Et3N (in MeOH, reflux, 2 h), cyanuric chloride [108-77-0] and collidine (in THF, room temp.), and Et3N. The activities of the dyes were assessed.

ST \*\*\*photog\*\*\* sensitizer cyanine merocyanine azine  
IT \*\*\*Photographic\*\*\* sensitizers  
(dinuclear cyanine and merocyanine dyes bearing azine groups)  
IT 2972-52-3  
RL: USES (Uses)  
(condensation of, with aminopropyl dye)  
IT 13242-19-8 24293-95-6 63971-43-7  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(condensation of, with cyanuric chloride)  
IT 108-77-0  
RL: USES (Uses)  
(condensation of, with dyes)  
IT 63971-39-1 63971-41-5 63999-15-5 70591-60-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(coupling of, with (phthalimidopropyl)benzothiazolium compd.)  
IT 63971-36-8  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(coupling of, with [(methylthio)propenyl]benzothiazolium compd.)  
IT 1745-32-0P 63971-27-7P 63971-28-8P 63971-29-9P 63971-30-2P  
63971-31-3P 63971-32-4P 63971-33-5P \*\*\*63971-44-8P\*\*\*  
64186-68-1P 70591-63-8P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
( \*\*\*photog\*\*\* . sensitizer, prepn. of)  
IT 13416-14-3P 63971-40-4P 63971-42-6P 63999-13-3P 63999-16-6P  
70591-58-1P 70591-61-6P 70591-62-7P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(prepn. of, as intermediate in \*\*\*photog\*\*\* . sensitizer prepn.)  
IT 141-84-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with (acetanilidovinyl)ethylbenzothiazolium iodide)  
IT 35080-47-8  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with rhodanine)

L4 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN  
AN 1977:525337 CAPLUS <<LOGINID::20061211>>  
DN 87:125337

ED Entered STN: 12 May 1984  
 TI Spectral sensitizer for \*\*\*photographic\*\*\* materials  
 IN Steiger, Rolf; Reber, Jean F.; Ezekiel, Aaron D.; Ficken, Geoffrey E.  
 PA Ciba-Geigy A.-G., Switz.  
 SO Ger. Offen., 137 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 IC G03C001-18,  
 CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic Processes)  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2611025	A1	19760930	DE 1976-2611025	19760316
	CH 596576	A	19780315	CH 1975-4847	19750416
	GB 1529201	A	19781018	GB 1975-11187	19760220
	US 4040825	A	19770809	US 1976-665981	19760311
	CA 1056389	A1	19790612	CA 1976-247880	19760315
	FR 2304940	A1	19761015	FR 1976-7730	19760317
	FR 2304940	B1	19790406		
	JP 51117619	A2	19761015	JP 1976-28210	19760317
	US 4138551	A	19790206	US 1977-781383	19770325
	CH 597325	A	19780331	CH 1977-9884	19770811
PRAI	GB 1975-11187	A	19750318		
	CH 1975-4847	A	19750416		
	CH 1976-2100	A	19760220		
	US 1976-665981	A3	19760311		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 2611025	IC	G03C001-18
	IPCI	G03C0001-18; G03C0001-14 [C*]; G03C0001-22; G03C0001-12 [C*]
	IPCR	G03C0001-10 [I,C*]; G03C0001-10 [I,A]; C09B0062-002 [I,C*]; C09B0062-002 [I,A]; G03C0001-12 [I,C*]; G03C0001-12 [I,A]; G03C0001-705 [I,C*]; G03C0001-705 [I,A]
CH 596576	IPCI	G03C0001-00
	IPCR	G03C0001-12 [I,C*]; G03C0001-12 [I,A]; G03C0001-705 [I,C*]; G03C0001-705 [I,A]
GB 1529201	IPCI	G03C0001-12; G03C0001-14; G03C0001-20; G03C0001-22; G03C0001-26
US 4040825	IPCI	G03C0001-02; G03C0001-08; G03C0001-16; G03C0001-14 [C*]; G03G0005-09; G03G0005-04 [C*]
	IPCR	G03C0001-10 [I,C*]; G03C0001-10 [I,A]; C09B0062-002 [I,C*]; C09B0062-002 [I,A]; G03C0001-12 [I,C*]; G03C0001-12 [I,A]; G03C0001-705 [I,C*]; G03C0001-705 [I,A]
	NCL	430/095.000; 430/093.000; 430/570.000; 430/573.000; 430/574.000; 430/576.000; 430/578.000; 430/579.000; 430/580.000; 430/583.000; 430/586.000; 430/588.000; 430/591.000; 430/592.000; 430/594.000
CA 1056389	IPCI	C09B0023-00; G03C0001-02
	IPCR	G03C0001-10 [I,C*]; G03C0001-10 [I,A]; C09B0062-002 [I,C*]; C09B0062-002 [I,A]; G03C0001-12 [I,C*]; G03C0001-12 [I,A]; G03C0001-705 [I,C*]; G03C0001-705 [I,A]
FR 2304940	IPCI	G03C0001-19; C09B0023-00
	IPCR	G03C0001-10 [I,C*]; G03C0001-10 [I,A]; C09B0062-002 [I,C*]; C09B0062-002 [I,A]; G03C0001-12 [I,C*]; G03C0001-12 [I,A]; G03C0001-705 [I,C*]; G03C0001-705 [I,A]
JP 51117619	IPCI	G03C0001-10
	IPCR	G03C0001-10 [I,C*]; G03C0001-10 [I,A]; C09B0062-002 [I,C*]; C09B0062-002 [I,A]; G03C0001-12 [I,C*]; G03C0001-12 [I,A]; G03C0001-705 [I,C*]; G03C0001-705 [I,A]
US 4138551	IPCI	C09B0023-06; C09B0023-04; C09B0023-00 [C*]
	IPCR	G03C0001-12 [I,C*]; G03C0001-12 [I,A]; G03C0001-705 [I,C*]; G03C0001-705 [I,A]
	NCL	544/212.000; 544/083.000; 544/113.000
CH 597325	IPCI	C09B0062-04; C09B0062-02 [C*]; C09B0023-00

/ Structure 20 in file .gra /

AB The spectral sensitization of gelatin-Ag halide \*\*\*photog\*\*\* .  
emulsions is achieved by using the reaction product of a spectral  
sensitizing dye with a hydrophilic colloid, such as gelatin. Thus, I 73.8  
mg in trifluoroethanol was added to 5% aq. gelatin (pH 8.5), the mixt.  
stirred while the temp. was raised from 45 to 60.degree., the  
trifluoroethanol was then removed, the soln. flocculated with Na2SO4,  
decanted, and the flocculate taken up in water and dialyzed using a  
cellulose membrane to remove the SO42- ion. A gelatin-AgBr emulsion was  
then prepd. using the gelatin-sensitizer dye soln. 150 g (55.35 mg of the  
bound dye), 1M NH4OH 3, 4M AgNO3 150, 4M NH4Br 150, and 25% aq. NH3 3mL.  
This emulsion, after flocculation with NH4NO3, decantation, and  
redispersal, was coated on a support, dried, and sensitometrically exposed  
to show a sensitization between 480 and 650 nm and a max. at 580 nm.

ST gelatin dye \*\*\*photog\*\*\* sensitizer  
IT \*\*\*Photographic\*\*\* sensitizers  
(dye-gelatin reaction products as)  
IT Gelatins, compounds  
RL: USES (Uses)  
(reaction products with dyes, as \*\*\*photog\*\*\* . sensitizers)  
IT 36877-69-7D, reaction products with gelatin 63971-26-6D, reaction  
products with gelatin 63971-27-7D, reaction products with gelatin  
63971-28-8D, reaction products with gelatin 63971-29-9D, reaction  
products with gelatin 63971-30-2D, reaction products with gelatin  
63971-31-3D, reaction products with gelatin 63971-32-4D, reaction  
products with gelatin 63971-33-5D, reaction products with gelatin  
RL: USES (Uses)  
(as \*\*\*photog\*\*\* . sensitizer)  
IT 13416-14-3P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(prepn. and reaction of, with cyanuric chloride)  
IT 63971-40-4P 63971-42-6P \*\*\*63971-44-8P\*\*\* 63971-45-9P  
63971-46-0P 63999-16-6P 64186-68-1P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)  
IT 141-84-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with acetanilidovinylbenzthiazolium iodide)  
IT 63971-47-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with chloropropionyl chloride and triethylamine)  
IT 13242-19-8 24293-95-6 63971-43-7 63999-13-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with cyanuric chloride)  
IT 108-77-0 625-36-5 2972-52-3 18791-02-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with dyes)  
IT 63971-36-8  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with ethyl(methylthio)propenylbenzthiazolium methyl  
sulfate).  
IT 63971-39-1 63971-41-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with methyl(phthalimido)benzthiazolium bromide)  
IT 63971-38-0 63999-15-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with methyl(phthalimidopropyl)benzthiazolium bromide)  
IT 35080-47-8  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with rhodanine)

ED Entered STN: 12 May 1984  
TI Silver halide \*\*\*photographic\*\*\* emulsions for use with laser light  
IN Habu, Teiji; Nakajima, Tomio; Mine, Kiyomitsu; Fujimori, Noboru; Sakamoto, Eiichi  
PA Konishiroku Photo Industry Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC G03C001-18  
CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic Processes)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 51115822	A2	19761012	JP 1975-40961	19750403
	JP 55002611	B4	19800121		
PRAI	JP 1975-40961	A	19750403		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 51115822	IC	G03C001-18
	IPCI	G03C0001-18; G03C0001-14 [C*]
	IPCR	G03C0001-12 [I,C*]; G03C0001-12 [I,A]; G03C0001-14 [I,C*]; G03C0001-18 [I,A]

GI For diagram(s), see printed CA Issue.

AB Ag halide \*\*\*photog\*\*\* emulsions for use with ruby laser light (694.3 nm) are obtained by using a spectral sensitizing dye with the formula I [Z1 = atoms required to complete a 4-quinoline ring; Z2 = atoms required to complete a thiazole, benzothiazole, naphthothiazole, selenazole, benzoselenazole, naphthoselenazole, oxazole, benzoxazole, naphthooxazole, 3H-benzindole or 2-quinoline ring; R, R1 = lower alkyl; R2 = lower alkyl or aryl; R3 = H, lower alkyl or aryl; X- = anion; m, n, p = 1,2]. Thus, a Ag(Br, I) (AgI 1 mol %) emulsion prep'd. in the conventional manner was sensitized with the dye II 50 mg/mol Ag halide, coated on a pretreated cellulose triacetate support, dried, exposed for 10-5 s with a ruby laser through a neutral gray wedge and developed to give a relative sensitivity of 115 vs. 100 when the film was exposed for 1 s with the red light from a W lamp with an interference filter.

ST laser sensitive \*\*\*photog\*\*\* emulsion; carbocyanine dye \*\*\*photog\*\*\* sensitizer

IT \*\*\*Photographic\*\*\* sensitizers  
(carbocyanine dyes as, for ruby laser-sensitive silver halide emulsions)

IT \*\*\*Photographic\*\*\* emulsions  
(ruby laser-sensitive, contg. carbocyanine dyes)

IT	20591-23-5	29704-16-3	51257-37-5	57752-49-5	62312-13-4
	62312-14-5	62312-15-6	62312-16-7	***62312-17-8***	62312-18-9
	62312-19-0	62312-20-3	62312-21-4	62312-22-5	62314-14-1
	62355-91-3				

RL: TEM (Technical or engineered material use); USES (Uses)

( \*\*\*photog\*\*\* sensitizer, for ruby laser-sensitive silver halide emulsions)

L4 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1974:431848 CAPLUS <<LOGINID::20061211>>

DN 81:31848

ED Entered STN: 12 May 1984

TI Sensitized electrophotographic layers

IN Oehlschlaeger, Hans; Riester, Oskar; Ghys, Theofiel H.; Verhille, Karel E.; Vanheertum, Johannes J.

PA Agfa-Gevaert A.-G.

SO Ger. Offen., 22 pp.

CODEN: GWXXBX

DT Patent

LA German

IC G03G

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2214055	A1	19730927	DE 1972-2214055	19720323
	BE 796792	A2	19730917	BE 1973-1004896	19730315



US 3881926	A	19750506	US 1973-342872	19730319
GB 1401133	A	19750723	GB 1973-13277	19730320
CA 984651	A1	19760302	CA 1973-166696	19730321
IT 979930	A	19740930	IT 1973-48929	19730322
CH 582368	A	19761130	CH 1973-4191	19730322
FR 2177095	A1	19731102	FR 1973-10544	19730323
JP 49008237	A2	19740124	JP 1973-32818	19730323
PRAI DE 1972-2214055	A	19720323		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 2214055	IC	G03G
	IPCI	G03G0005-04
	IPCR	G03G0005-04 [I,C*]; G03G0005-09 [I,A]; C09B0023-00 [I,C*]; C09B0023-01 [I,A]; G03G0005-06 [I,C*]; G03G0005-06 [I,A]
BE 796792	IPCI	G03G
	IPCR	G03G0005-04 [I,C*]; G03G0005-09 [I,A]; C09B0023-00 [I,C*]; C09B0023-01 [I,A]; G03G0005-06 [I,C*]; G03G0005-06 [I,A]
US 3881926	IPCI	G03G0005-08
	IPCR	G03G0005-04 [I,C*]; G03G0005-09 [I,A]; C09B0023-00 [I,C*]; C09B0023-01 [I,A]; G03G0005-06 [I,C*]; G03G0005-06 [I,A]
GB 1401133	NCL	430/078.000; 430/083.000; 430/093.000
CA 984651	IPCI	G03G0005-09; G03G0005-04 [C*]
	IPCR	G03G0005-04 [I,C*]; G03G0005-09 [I,A]; C09B0023-00 [I,C*]; C09B0023-01 [I,A]; G03G0005-06 [I,C*]; G03G0005-06 [I,A]
IT 979930	IPCI	G03G
	IPCR	G03G0005-04 [I,C*]; G03G0005-09 [I,A]; C09B0023-00 [I,C*]; C09B0023-01 [I,A]; G03G0005-06 [I,C*]; G03G0005-06 [I,A]
CH 582368	IPCI	G03G0005-09; G03G0005-04 [C*]
	IPCR	G03G0005-04 [I,C*]; G03G0005-09 [I,A]; C09B0023-00 [I,C*]; C09B0023-01 [I,A]; G03G0005-06 [I,C*]; G03G0005-06 [I,A]
FR 2177095	IPCI	G03G0005-04
	IPCR	G03G0005-04 [I,C*]; G03G0005-09 [I,A]; C09B0023-00 [I,C*]; C09B0023-01 [I,A]; G03G0005-06 [I,C*]; G03G0005-06 [I,A]
JP 49008237	IPCI	G03G0005-04
	IPCR	C09B0023-00 [I,C*]; C09B0023-01 [I,A]; G03G0005-06 [I,A]; G03G0005-06 [I,C*]

GI For diagram(s), see printed CA Issue.

AB Cyanine dyes (I, II, III; R = NO<sub>2</sub>, acyl; R<sub>1</sub>, R<sub>2</sub> = aryl, satd. or unsatd. aliph.; R<sub>3</sub> = H, aryl, satd. or unsatd. aliph.; R<sub>4</sub> = SR<sub>7</sub>, NR<sub>8</sub>R<sub>9</sub> where R<sub>7</sub>, R<sub>8</sub>, R<sub>9</sub> = aliph. or R<sub>8</sub>R<sub>9</sub> together completing a 5- or 6-member heterocyclic ring; n, p = 0, 1; M = 0-3 interger; X<sup>-</sup> = anion; Z<sub>1</sub>, Z<sub>2</sub> = atom groups for completing a 5- or 6-member heterocyclic ring.) are used as spectral sensitizers for zinc oxide and org. photoconductors in electrophotog. Thus, 0.1 g IV as 0.1% soln. in DMF was added to a photoconductive compn. prepd. from ZnO 20, acrylic copolymer 4.5 g, PhMe 20, EtOAc 11 and 10% tetrachlorophthalic anhydride in EtOH 0.66 ml., coated on a baryta paper (25 g ZnO/m<sup>2</sup>), charged, exposed to an incandescent lamp (2280 lx) through a stepwedge for 15 sec to give 25 steps with a max. sensitivity at 555 nm. as compared to only 14 steps for IV-free control.

ST cyanine sensitizer electrophotog

IT \*\*\*Photographic\*\*\* sensitizers  
(electro-, cyanine dyes as)

IT	42905-55-5	42905-56-6	42905-57-7	42905-58-8	***42905-61-3***
	42905-69-1	42905-72-6	42905-84-0	42905-86-2	42905-95-3
	43138-17-6	53035-24-8	53035-26-0	53035-28-2	53035-30-6
	53035-32-8	53035-34-0	53035-36-2	53035-38-4	53092-12-9
	1	53100-80-4			53092-14-

RL: USES (Uses)

(electrophotog. sensitizer)

L4 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1973:425684 CAPLUS <<LOGINID::20061211>>

DN 79:25684

ED Entered STN: 12 May 1984  
 TI Polymethine sensitizers for direct-positive emulsions  
 IN Riestter, Oskar; Oehlschlaeger, Hans; Odenwaelder, Heinrich  
 PA Agfa-Gevaert A.-G.  
 SO Ger. Offen., 28 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 IC G03C  
 CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic Processes)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2142967	A1	19730308	DE 1971-2142967	19710827
	BE 787442	A2	19730212	BE 1972-1004289	19720811
	US 3846137	A	19741105	US 1972-282968	19720823
	GB 1392127	A	19750430	GB 1972-39408	19720824
	FR 2150884	A1	19730413	FR 1972-30441	19720825
	CH 566572	A	19750915	CH 1972-12610	19720825
	CA 995052	A1	19760817	CA 1972-150158	19720825
	JP 48032528	A2	19730428	JP 1972-85464	19720828
PRAI	DE 1971-2142967	A	19710827		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 2142967	IC	G03C
	IPCI	G03C0001-20; G03C0001-14 [C*]
	IPCR	C09B0023-00 [I,C*]; C09B0023-00 [I,A]; C09B0023-01 [I,A]; G03C0001-485 [I,C*]; G03C0001-485 [I,A]
BE 787442	IPCI	G03C
US 3846137	IPCI	G03C0001-16; G03C0001-18; G03C0001-14 [C*]
	IPCR	C09B0023-00 [I,C*]; C09B0023-00 [I,A]; C09B0023-01 [I,A]; G03C0001-485 [I,C*]; G03C0001-485 [I,A]
GB 1392127	NCL	430/581.000; 430/584.000; 430/586.000; 430/589.000
	IPCI	G03C0001-485; G03C0001-22; G03C0001-12 [C*]; G03C0001-20; G03C0001-18; G03C0001-14 [C*]; C09B0023-08; C09B0023-06; C09B0023-10; C09B0023-00 [C*]
	IPCR	C09B0023-00 [I,C*]; C09B0023-00 [I,A]; C09B0023-01 [I,A]; G03C0001-485 [I,C*]; G03C0001-485 [I,A]
FR 2150884	IPCI	G03C0001-00
	IPCR	C09B0023-00 [I,C*]; C09B0023-00 [I,A]; C09B0023-01 [I,A]; G03C0001-485 [I,C*]; G03C0001-485 [I,A]
CH 566572	IPCI	G03C0001-20; G03C0001-14 [C*]
	IPCR	C09B0023-00 [I,C*]; C09B0023-00 [I,A]; C09B0023-01 [I,A]; G03C0001-485 [I,C*]; G03C0001-485 [I,A]
CA 995052	IPCR	C09B0023-00 [I,C*]; C09B0023-00 [I,A]; C09B0023-01 [I,A]; G03C0001-485 [I,C*]; G03C0001-485 [I,A]
JP 48032528	IPCI	G03C0001-20; G03C0001-14 [C*]
	IPCR	C09B0023-00 [I,C*]; C09B0023-01 [I,A]; G03C0001-485 [I,A]; G03C0001-485 [I,C*]

GI For diagram(s), see printed CA Issue.

AB Previously described polymethine dyes from heterocyclic base constituents of cyanine dyes with a CN, NO2, or acyl group at a lateral CH group of the polymethine chain, 20-70 mg/kg, are particularly suitable for direct pos. emulsions because their sensitizing curve is steep and they leave little strain. The sensitizing maxs. of 51 examples vary between 515 and 655 nm. Thus, 2-(cyanomethylene)-3-ethylbenzothiazole 1.0 g and 4-(acetanilidovinyl)-1,3-dimethyl-2-pyrimidone perchlorate 1.7 g were refluxed in Ac2O 10 ml for 10 min to yield I, a typical dye with a sensitizing max. at 580 nm.

ST direct pos \*\*\*photog\*\*\* sensitizer; methine dye sensitizer  
 \*\*\*photog\*\*\*

IT \*\*\*Photographic\*\*\* sensitizers  
 (polymethine dyes contg. cyano and nitro groups as, for direct-pos. emulsions)

IT	21648-40-8	42905-55-5	42905-56-6	42905-57-7	42905-58-8
	***42905-59-9***	42905-60-2	***42905-61-3***	***42905-62-4***	
	42905-63-5	42905-64-6	42905-65-7	42905-66-8	42905-67-9
	42905-68-0	42905-69-1	42905-70-4	42905-71-5	42905-72-6
	42905-73-7	42905-74-8	42905-75-9	***42905-76-0***	42905-77-1
	42905-78-2	42905-79-3	42905-80-6	42905-81-7	42905-82-8
	42905-83-9	42905-84-0	42905-85-1	42905-86-2	42905-87-3

42905-88-4 42905-89-5 42905-90-8 42905-91-9 42905-92-0  
42905-93-1 42905-94-2 42905-95-3 42905-96-4 42905-97-5  
42905-98-6 42905-99-7 42906-00-3 43004-13-3 43138-17-6 49715-94-  
8 50795-72-7

RL: TEM (Technical or engineered material use); USES (Uses)  
( \*\*\*photog\*\*\* . sensitizer, for direct-pos. emulsions)

L4 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN  
AN 1973:50550 CAPLUS <<LOGINID::20061211>>  
DN 78:50550  
ED Entered STN: 12 May 1984  
TI Supersensitized \*\*\*photographic\*\*\* emulsions  
IN Hiller, Gary L.  
PA Eastman Kodak Co.  
SO U.S., 6 pp.  
CODEN: USXXAM  
DT Patent  
LA English  
IC G03C  
INCL 096126000  
CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic Processes)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3706567	A	19721219	US 1970-90435	19701117
PRAI	US 1970-90435	A	19701117		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 3706567	IC	G03C
	INCL	096126000
	IPCI	G03C0001-14
	NCL	430/576.000

AB The triazinylaminostilbenesulfonates disclosed in U.S. 3,416,927 and 2,933,390 are used to supersensitive gelatin-Ag halide emulsions contg. sym. or unsym. cyanine or merocyanine imidazolo[4,5-b]-quinoline spectral sensitizing dyes. Thus, a \*\*\*photog\*\*\* . gelatin Ag-(Br, I) emulsion contg. 0.08 g/mole Ag of 1,1',3,3'-tetraethyl-1H-imidazlo[4,5-b]quinocarbocyanine iodide (I) and 0.50 g/mole Ag of di-Na 4,4'-bis[anilino-6-hydroxy-s-triazin-2-ylamino-stilbenel]-2,2'-disulfonate (II) had a relative speed of 933 vs. 100 for a II-free control emulsion contg. only I as the spectral sensitizer.

ST spectral sensitization \*\*\*photog\*\*\* emulsion; silver halide supersensitization; gelatin silver halide supersensitization

IT \*\*\*Photographic\*\*\* sensitizers  
(super-, imidazoquinocarbocyanine dye-triazinylaminostilbene sulfonate combinations as)

IT 1264-32-0

RL: USES (Uses)

( \*\*\*photographic\*\*\* supersensitizers from imidazoquinocarbocyanine dyes and)

IT 4742-61-4 4742-64-7 4742-69-2 4742-71-6 4977-20-2 4980-85-2  
4980-86-3 5036-79-3 28279-24-5 40261-77-6 \*\*\*40261-78-7\*\*\*  
40261-83-4 40261-84-5

RL: USES (Uses)

( \*\*\*photographic\*\*\* supersensitizers from triazinylaminostilbene sulfonates and)

L4 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1971:524997 CAPLUS <<LOGINID::20061211>>

DN 75:124997

ED Entered STN: 12 May 1984

TI Supersensitized \*\*\*photographic\*\*\* silver halide emulsions

IN Kalenda, Norman W.

SO Def. Publ. U. S. Pat. Off. T, 5 pp.

From: Off. Gaz., U. S. Patent Off. 1971, 888(3), 707.

CODEN: USXXBN

DT Patent

LA English

IC G03C

INCL 096124000

CC 74 (Radiation Chemistry, Photochemistry, and Photographic Processes)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 888015		19710720	US	19601204

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 888015	IC	G03C
	INCL	096124000
	IPCI	G03C
	NCL	073/385.000

AB \*\*\*Photog\*\*\* Ag halide emulsions are supersensitized by incorporating in the emulsion benzimidazolocarbocyanine dyes with unsym. carbocyanine dyes having 1H-imidazo[4,5-b] quinoline nuclei. An example is a gelatin Ag(Br,I) emulsion of the type described by Trivelli, et al. (1939) contg. 0.08 mg/mole Ag of 4,4',5-5'-tetrachloro-1,1',3,3'-tetraethylbenzimidazolocarbocyanine iodide and 0.08 mg/mole Ag of 1,3,3'-triethyl-1H-imidazo[4,5-b]-quinothiacarbocyanine iodide.

ST supersensitizer benzimidazolo carbocyanine; silver halide supersensitizing; emulsion \*\*\*photog\*\*\* supersensitizing

IT \*\*\*Photographic\*\*\* sensitizers  
(super-, benzimidazolocarbocyanine-imidazoquinothiacarbocyanine dye mixts. as)

IT 4742-64-7 4742-65-8 34030-48-3 34030-49-4 34030-52-9 34030-53-0  
40261-77-6 \*\*\*40261-78-7\*\*\*

RL: USES (Uses)

( \*\*\*photographic\*\*\* supersensitizers from benzimidazolocarbocyanine dyes and)

IT 3325-10-8 5491-34-9 5563-28-0 34030-40-5 34030-42-7 34030-43-8  
34030-44-9 34030-45-0

RL: USES (Uses)

( \*\*\*photographic\*\*\* supersensitizers from imidazoquinothiacarbocyanine dyes and)

L4 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1970:525723 CAPLUS &lt;&lt;LOGINID::20061211&gt;&gt;

DN 73:125723

ED Entered STN: 12 May 1984

TI Spectral sensitized \*\*\*photographic\*\*\* silver halide emulsions

IN Shiba, Keisuke; Hinata, Masanao; Tsuji, Nobuo; Sawahara, Masao

PA Fuji Photo Film Co. Ltd.

SO Ger. Offen., 22 pp.

CODEN: GWXXBX

DT Patent

LA German

IC G03C

CC 74 (Radiation Chemistry, Photochemistry, and Photographic Processes)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 1960730	A	19700702	DE 1969-1960730	19691203
DE 1960730	B2	19730208		
DE 1960730	C3	19730823		
JP 49049504	B4	19741227	JP 1968-88768	19681204
BE 742588	A	19700514	BE 1969-742588	19691203
FR 2025194	A5	19700903	FR 1969-41642	19691203
GB 1283595	A	19720726	GB 1969-1283595	19691203
US 3615637	A	19711026	US 1969-882271	19691204
PRAI JP 1968-88768	A	19681204		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 1960730	IC	G03C
	IPCI	G03C [ICM]
	IPCR	C08G0008-00 [I,C*]; C08G0008-00 [I,A]; C08G0008-00 [I,A]; G03C0001-04 [I,C*]; G03C0001-04 [I,A]; G03C0001-08 [I,C*]; G03C0001-28 [I,A]
JP 49049504	IPCI	G03C0001-28; G03C0001-08 [C*]
BE 742588	IPCI	G03C0001-28; G03C0001-08 [C*]
FR 2025194	IPCI	G03C0007-00 [ICM]; C09B0023-00 [ICS]; C07C0039-00 [ICS]; C07C0143-00 [ICS]; C07C0065-00 [ICS]
GB 1283595	IPCI	G03C0001-28; G03C0001-08 [C*]

US 3615637 IPCI G03C0001-28 [ICM]; G03C0001-08 [ICM,C\*]  
NCL 430/576.000; 430/582.000; 430/586.000

GI For diagram(s), see printed CA Issue.

AB Ag halide \*\*\*photographic\*\*\* emulsions with increased sensitivity and decreased fog contain a sensitizer dye of general formula I, where Z1 is a nonmetallic group which completes a 4-quinoline nucleus, Z2 is a nonmetallic group which completes a 5- or 6-membered heterocycle, R1 and R2 are optionally substituted alkyl, m = 1 or 2, X is an anion, p = 1 or 2, being 1 when the dye forms an internal salt, and a novolak of an optionally substituted hydroxybenzene (II) and HCHO. Typical examples of I are III and IV. Typical II are 4-hydroxybenzoic acid hydrazide, p-chlorophenol, Na hydroxybenzenesulfonate, o-, m-, or p-hydroxybenzoic acid, hydroquinone, and gallic acid. From 0.002 to 0.2 g of I and 0.1-5 g of the novolak are added per mole of Ag halide in the emulsion. Ag halide emulsions contg. I and the novolak are coated on cellulose acetate, exposed, and developed conventionally and show greater increases in sensitivity and decreases in fog than emulsions contg. only I.

ST spectral sensitizing \*\*\*photog\*\*\* emulsions; emulsions \*\*\*photog\*\*\* spectral sensitizing; sensitizing spectral \*\*\*photog\*\*\* emulsions; dyes spectral sensitizing \*\*\*photog\*\*\* ; novolak dyes spectral sensitizing

IT \*\*\*Photographic\*\*\* sensitizers  
(super-, from carbocyanine dyes and formaldehyde-hydroxybenzoic acid reaction products)

IT Benzoic acid, p-hydroxy-  
Gallic acid  
Hydroquinone  
RL: USES (Uses)  
(reaction products with formaldehyde, \*\*\*photographic\*\*\* supersensitizers from carbocyanine dyes and)

IT Salicylic acid  
RL: USES (Uses)  
(reaction products with formaldehyde, \*\*\*photographic\*\*\* supersensitizers from carbocyanine dyes and)

IT Formaldehyde  
RL: USES (Uses)  
(reaction products with hydroxybenzoic acids, \*\*\*photographic\*\*\* supersensitizers from carbocyanine dyes and)

IT 2642-25-3 20591-23-5 29704-12-9 29704-13-0 \*\*\*29704-14-1\*\*\*  
29704-15-2 29704-16-3 29704-18-5 29704-19-6 29704-20-9  
29704-21-0 29704-22-1 29704-23-2 29704-24-3 31598-35-3  
RL: USES (Uses)  
( \*\*\*photographic\*\*\* supersensitizers from formaldehyde-hydroxybenzoic acid reaction products and)

IT 99-06-9  
RL: USES (Uses)  
(reaction products with formaldehyde, \*\*\*photographic\*\*\* supersensitizers from carbocyanine dyes and)

IT 106-48-9  
RL: USES (Uses)  
(reaction products with formaldehyde, \*\*\*photographic\*\*\* supersensitizers from carbocyanine dyes and)

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(FILE 'HOME' ENTERED AT 08:03:40 ON 11 DEC 2006)

FILE 'REGISTRY' ENTERED AT 08:03:48 ON 11 DEC 2006

L1 248 S QUINOLINIUM AND INDOL(5W)YLIDENE AND PROPENYL

FILE 'CAPLUS' ENTERED AT 08:04:53 ON 11 DEC 2006

L2 67 S L1

L3 8 S (OPTICAL OR LASER OR INFORMATION) AND L2

L4 9 S L2 AND PHOTOGRAPHIC

=> log y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	60.91	81.04

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
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SESSION  
-12.75

STN INTERNATIONAL LOGOFF AT 08:06:13 ON 11 DEC 2006